

AMENDMENTS TO THE CLAIMS

Before claim 1, change ~~Patent Claims~~ to WE CLAIM:

Cancel claims 1-12 without prejudice or disclaimer of the subject matter therein and substitute new claims 13-24 therefor:

Claims 1-12 (cancelled)

13. (new) A control device for a work appliance comprising:

a scoop held on an extension arm, in particular for a wheeled loader;

two hydraulic cylinders, of which the first actuates the extension arm and the second actuates the scoop;

a pump supplying the two cylinders with pressure medium from a tank; and

wherein the control device comprises:  
two valves, of which the first valve controls the supply of

pressure medium from the pump to the first cylinder and the second valve controls the supply of pressure medium from the pump to the second cylinder;

wherein the control device is operative to activate each of the valves (42, 41) by holding the ratio ( $Q_2/Q_1$ ) of the pressure medium quantities ( $Q_2, Q_1$ ) supplied to the two cylinders (22, 18) at a constant value ( $K_Q$ ) independently of the size of a control signal ( $y_{st1}$ ) supplied to the first valve (41).

14. (new) The control device as claimed in claim 13, wherein each of said valves (41, 42) is provided with a slide (47, 50) acted upon by an adjustable control pressure ( $P_{st1A}$  or  $P_{st1B}$ ,  $P_{st2A}$  or  $P_{st2B}$ );

the control pressure ( $P_{st1A}$  or  $P_{st1B}$ ,  $P_{st2A}$  or  $P_{st2B}$ ) deflects the slide (47, 50) counter to the force of a spring (48 or 49, 51 or 52), the positions of the respective slides (47, 50) being a measure of the force resulting from the control pressures ( $P_{st1A}$  or  $P_{st1B}$ ,  $P_{st2A}$  or  $P_{st2B}$ ) acting on the slide (47, 50) and from the surfaces of the respective cylinders acted upon by pressure;

each of said slides (47, 50) is provided with a notch which runs in its longitudinal direction and determines the size of the passage cross section ( $A_{A1}$  or  $A_{B1}$ ,  $A_{A2}$  or  $A_{B2}$ ) of the respective valve (41, 42) and which provides a

respective passage cross section ( $A_{A1}$  or  $A_{B1}$ ,  $A_{A2}$  or  $A_{B2}$ ) for the respective valve (41, 42) determined by the position of the slide (47, 50); and

each of said valves (41, 42) is assigned a pressure compensator (79, 85) which keeps the pressure drop ( $\Delta p_1$ ,  $\Delta p_2$ ) of the valves (41, 42) at the same value.

15. (new) The control device as claimed in claim 14, wherein the passage cross section ( $A_{A1}$  or  $A_{B1}$ ,  $A_{A2}$  or  $A_{B2}$ ) of each of the two valves (41, 42) changes linearly with the control pressure ( $p_{st1A}$  or  $p_{st1B}$ ,  $p_{st2A}$  or  $p_{st2B}$ ) supplied to them.

16. (new) The control device as claimed in claim 14, wherein a surface of the slide (47) of the first valve (41) which is acted upon by the control pressure ( $p_{st1A}$  or  $p_{st1B}$ ) is equal to a surface of the slide (50) of the second valve (42) which is acted upon by the control pressure ( $p_{st2A}$  or  $p_{st2B}$ ).

17. (new) The control device as claimed in claim 14, wherein the inlet of the second valve (42) for the control pressure ( $p_{st2A}$  or  $p_{st2B}$ ) is preceded by a valve arrangement (65, 66; 68, 69), via which said valve can be supplied with the control pressure ( $p_{st1A}$ ,  $p_{st1B}$ ) for the

rotational movement of the extension arm (12) or with the control pressure ( $P_{St3A}$ ,  $P_{St3B}$ ) for the rotational movement of the scoop (14).

18. (new) The control device as claimed in claim 17, wherein the valve arrangement is constructed as a shuttle valve (65, 68), one inlet of which is supplied with the control pressure ( $P_{St1A}$ ,  $P_{St1B}$ ) for the rotational movement of the extension arm (12) and the other inlet of which is supplied with the control pressure ( $P_{St3A}$ ,  $P_{St3B}$ ) for the rotational movement of the scoop (14).

19. (new) The control device as claimed in claim 18, wherein, in the control pressure line (56, 57) leading to the first inlet of the shuttle valve (65, 68), a switching valve (66, 69) is arranged, which, in one position, interrupts the supply of the control pressure ( $P_{St1A}$ ,  $P_{St1B}$ ) for the rotational movement of the extension arm (12) to the inlet for the control pressure ( $P_{St2A}$ ,  $P_{St2B}$ ) of the second valve (42), and at the same time supplies the first inlet of the shuttle valve (65, 68) with a pressure (tank pressure) which is lower than the respective control pressure ( $P_{St3A}$ ,  $P_{St3B}$ ) for the rotational movement of the scoop (14) or is equal to said control pressure.

20. (new) The control device as claimed in 17, wherein the valve arrangement (69\*, 68) interrupts the supply of the control pressure ( $p_{st1B}$ ) for the rotational movement of the extension arm (12) in the lowering direction to the inlet for the control pressure ( $p_{st2B}$ ) of the second valve (42) when this pressure ( $p_{st1B}$ ) overshoots an adjustable value ( $p_{sts}$ ).

21. (new) The control device as claimed in claim 20, wherein the switching valve (66\*) interrupts the supply of the control pressure ( $p_{st1A}$ ) for the rotational movement of the extension arm (12) in the raising direction to the first inlet of the assigned shuttle valve (65) when the pressure ( $p_{st1B}$ ) for the rotational movement of the extension arm (12) in the lowering direction overshoots an adjustable value ( $p_{sts}$ ).

22. (new) The control device as claimed in claim 14, wherein the notch (95) of the slide (50) of the second valve (42) is formed in such a way that, when the slide (50) of the second valve (42) is acted upon by a control pressure ( $p_{st2A}$ ,  $p_{st2B}$ ) which is higher than the control pressure ( $p_{st1A(65\%)}$ ,  $p_{st1B(65\%)}$ ), required for the maximum pressure medium quantity ( $Q_{1max}$ ), for the first valve (41), the passage cross section ( $A_{A2}$ ,  $A_{AB2}$ ) of the second valve (42) increases with a rise in control pressure ( $p_{st2A}$ ,  $p_{st2B}$ ) to a greater extent than in the range below the control pressure ( $p_{st1A(65\%)}$ ,

$P_{st1B}(65\%)$ ), required for the maximum pressure medium quantity ( $Q_1$ ), for the first valve (41).

23. (new) The control device as claimed in claim 14, wherein the spring constant of the spring (48 or 49) acting on the first slide (47) is equal to the spring constant of the spring (50, 51) acting on the second slide (50).

24. (new) The control device as claimed in claim 14, wherein a counterholding valve (91, 87) controlled by the inflow pressure is arranged in a line (35, 39) leading from a cylinder (18, 22) acted upon by a pulling load to the tank (29).